NPIC/P&DS/D/6-794
17 February 1966

MEMORANDUM FOR: Assistant for Photographic Analysis, NPIC

SUBJECT: P. I. Print Enlarger

REFERENCE: IPO/OSB/M-43/65

1. An investigation for a P.I. Print Enlarger has been conducted as you requested. We have found no commercial item which fits your specifications exactly. However, we have turned up a number of shelf items which might fill the requirement if we relax some of the specifications. Below are two possibilities with a brief description of each:

A. A three step system could be put together consisting of (a) a high intensity light contact printer, such as found on the Rapid Interpretation Printer Processor in IAD, (b) a Kalvar heat developer, (c) a K&E Micro-Master Viewer-Printer. This would allow the P.I. to view the positive film on the modified Light Table, contact print a Kalvar negative, heat process the negative and print a 4X enlargement up to 18" X 24" from a 4.5" X 6" area. The total time to do these operations would be about 2 minutes.

B. A two step system is possible utilizing a Model 316 Quick Copy Camera with Polaroid P/N film (or if it is on the market at that time, the new Polaroid dry negative film) and the K&E Micro-Master reader printer. This would produce a 16" X 20", 12.5X enlargement of a 1.2" X 1.6" area of the D.P.

2. There are only a few positive-to-positive (reversal) processes in existance today. One feature common to all of these is the relatively slow speed of the materials. This slow speed precludes use in an enlarger such as you have requested. To get around the limitations of the reversal printing material, a very stable enlarger would have to be developed or else the state-of-the-art of reversal processes would have to be improved. Either of these choices would require a large expenditure. Another costly development feature of the PAG requirement is the compactness desired. A highly sophisticated optical system is necessitated to allow room for the mechanical works. In short, we feel that the specification listed in the referenced memo are not feasible.

3. It is recommended that PAG review their requirement, evaluate the possibility of using commercially available equipment, determine whether the costs of development can be justified, and if so, what tolerances can be allowed on the specifications.

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[redacted]

Colonel, USAF
Assistant for Plans and Development, NPIC

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